ENGINEERING PROJECTS

ENGINEERING DISPLAY
You may enter ATV, automotive, bicycles, handyman, rocketry, small engines, snowmobile, etc., projects in the Educational Display classes on pages.

Please notify the State 4-H office if special requirements are needed for your exhibit – such as power, space, etc.

ELECTRIC ENERGY

Exhibits will be any of the articles included in the project manuals, or other articles that show skills learned in the project. Items must be labeled with member’s name, county, and class number. To qualify for judging, an Electric Energy Explanation Card must be attached. Forms are available at the county Extension offices and at the State 4-H website: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials. Intermediates and seniors include a schematic diagram.

Classes will be divided into the following groups:

862 100 001 Electricity, Junior
861 100 002 Electricity, Intermediate
861 100 003 Electricity, Senior

TRACTOR PROJECTS

In each class the exhibit shall be an educational exhibit, which will show or illustrate what the member has learned. Include an explanation telling: (a) how the exhibit was made or what was done in the project; (b) operating instructions (if appropriate); and (c) what the member learned by doing the project. Explanations are required to qualify the exhibit for judging.

881 100 001 - Junior
881 100 002 - Intermediate
881 100 003 - Senior

WOODWORKING

In each class the exhibit shall be one article, or pair of articles made of wood by the 4-H member. Completed “Woodworking Explanation Card” 871-02 is required to qualify the exhibit for judging. Judging criteria are outlined on 4-H Woodworking Exhibit Score Card (40-635), available at the county Extension office or on the state 4-H website at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials.

871 100 001 - Woodworking, Junior
871 100 002 - Woodworking, Intermediate
871 100 003 - Woodworking, Senior
You may include disks or CDs as part of your exhibit. If you do, all files must be: compatible with a PC.

Online projects using Google applications or other Web 2.0 software are acceptable. Youth must make sure clear directions are given in the project explanation so the judges can find and access the project online. Website exhibits must be viewable online or on a cd format.

Exhibits entered in the “Programming” class must be a program written, translated, or substantially (at least 30%) altered by the 4-H member. Programming projects please submit a hard copy with all exhibits.

**Note:** Fill in blank in class number (__) with one of the following numbers.

- 11 Junior, First year in this project area
- 21 Other, Junior
- 12 Intermediate, First year in this project area
- 22 Other, Intermediate
- 13 Senior, First year in this project area
- 23 Other Senior
- 34 Club Exhibit

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**841 100 1** __ Renewable Energy

**861 100 1** __ Software Application, Word Processing

**861 101 1** __ Software Application, Excel/Spreadsheet

**861 102 1** __ Software Application, Presentation Software

**861 103 1** __ Software Application, Graphic Design/Digital Imaging

**861 104 1** __ Software Application, Database Management

**861 105 1** __ Software Application, Multimedia Projects

**861 100 2** __ Programming

**861 100 3** __ Hardware Design

**863 102 1** __ Lego Construction Displays

**863 103 1** __ Robotics

**860 100 1** __ GPS/GIS, Projects

**860 101 5** __ GPS/GIS, Maps

**860 200 1** __ Geography

**851 100 1** __ Aerospace/Aeronautics

**852 100 1** __ Rocketry

**800 600 1** __ Science Fair

**861 600 1** __ Challenges

**211 600 032** Technical Presentation, Intermediate, Individual

**211 600 033** Technical Presentation, Intermediate, Team

**211 600 042** Technical Presentation, Senior, Individual

**211 600 043** Technical Presentation, Senior, Team

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**841 100 1** __ Renewable Energy

Description: Projects involving youth learning and displaying knowledge about Renewable Energy or Sustainable Living. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
**861 100 1_ Software Application, Word Processing**
Description: Projects created by youth that show learning in the area of word processing. Project should be an original creation by the participant that shows their word processing skills. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Evaluation: Use Computer Software Application Evaluation available at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

**861 101 1_ Software Application, Excel/Spreadsheet**
Description: Projects created by youth that show learning in the area of spreadsheet design and usage. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have some formula usage in their project. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Evaluation: Use Computer Software Application Evaluation available at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

**861 102 1_ Software Application, Presentation Software**
Description: Projects should be created by youth to show learning in the area of presentation design skills. Software can be any current presentation software including online versions like Google applications or voicethread.com. Project should be created by the participant to show their presentation design skills. Youth can also submit video clips of how the presentation was used. (For example: A video clip of the youth using the presentation in a group activity.) Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Computer Software Application Evaluation available at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

**861 103 1_ Software Application, Graphic Design/Digital Imaging**
Description: Projects created by youth that show learning in the area of graphic design or digital Imaging. Software can be any current presentation software including online versions. Project should be created by the participant to show their graphic design or digital imaging skills. Youth are responsible for submitting clear directions on how judges can access them or program. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Evaluation: Use Computer Software Application Evaluation available at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

**861 104 1_ Software Application, Database Management**
Description: Projects created by youth that show learning in the area of database management. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Evaluation: Use Computer Software Application Evaluation available at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

**861 105 1_ Software Application, Multimedia Projects**
Description: Projects created by youth that show learning in the area of Multimedia Projects. Software can be any current software including online versions. Project should be created by the participant to show their multimedia skills. In general, multimedia includes a combination of text, audio, still images, animation, video, or animation. Multimedia combines multiple content forms. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

861 100 2__ Programming
Description: Projects created by youth that show learning in the area of programming. Project should be created by the participant to show their programming skills. Hard copy of program must be submitted, and it is up to the youth to ensure the program will function or display at Fair. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Computer Programming Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials.

861 100 3__ Hardware Design
Description: Projects created by youth that show learning in the area of hardware. Project should be an original creation by the participant that shows their computer hardware skills. It is up to the youth to ensure the hardware and project will function or display at Fair. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Computer Hardware Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials.

863 102 1__ Lego Construction Display
Description: An original creation built out of Legos. The project does not need to be robotic. Participant should answer the description page carefully and in full sentences. Evaluation: Use Lego Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

863 103 1__ Robotics
Description: Project should involve youth created robots. They can be created from kits or from miscellaneous parts. All robots will be returned after fair. More weight is given for youth designed projects. Robot and full description of what it is meant to accomplish must be submitted. Robots will be judged on structural stability, creativity, functionality. Youth are responsible for submitting clear directions on how judges can access the files and make robot function. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Robotic Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

860 100 1__ GPS/GIS, Projects
Description: GPS or GIS Projects. Projects consist of a detailed goal, and multiple applications of either GPS or GIS skills. A conclusion is reached, a problem was evaluated or studied, a solution was found (or the problem was better defined) Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description

860 101 1_ GPS/GILS, Maps
Description: A map is a single product of the data gathering, manipulation and presentation skills. Maps can be computer generated or hand drawn. Multiple maps should be entered under GPS/GIS Projects. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Map Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

860 200 1_ Geography
Description: Projects involving youth learning and displaying knowledge about geography. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Geography Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-material
Online ideas: http://www.myWonderfulWorld.org

851 100 1_ Aerospace/Aeronautics
Description: Projects involving youth learning and displaying knowledge about Aerospace or Aeronautics. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Evaluation: Use Aerospace/Aeronautics Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

852 100 1_ Rocketry
Description: Projects involving youth learning and displaying knowledge about Rocketry. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Rocket launch may be available at Oregon State Fair. If launch is now available, projects will be based on rockets and write ups regarding a group launch. Evaluation: Use Rocketry Evaluation available at: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials

Engineering Projects

You may enter ATV, automotive, bicycles, handyman, rocketry, small engines, snowmobile, etc., projects in the Educational Display classes.

Electric Energy

Exhibits will be any of the articles included in the project manuals, or other articles that show skills learned in the project. Items must be labeled with member’s name, county, and class number. To qualify for judging, an Electric Energy Explanation Card must be attached. Forms are available at the county Extension offices and at the State 4-H website: http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials Intermediates and seniors include a schematic design.
Tractor Projects
In each class the exhibit shall be an educational exhibit which will show or illustrate what the member has learned. Include an explanation telling: (a) how the exhibit was made or what was done in the project; (b) operating instructions (if appropriate); and (c) what the member learned by doing the project. **Explanations are required** to qualify the exhibit for judging.

Wood Working
In each class, the exhibit shall be one article or pair of articles made of wood by the 4-H member. Completed “Woodworking Explanation Card” 871-02 is required to qualify the exhibit for judging. Judging criteria are outlined on 4-H Woodworking Exhibit Score Card (40-635), available at the county Extension office or on the State 4-H website at: [http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials](http://oregon.4h.oregonstate.edu/fair-exhibit-and-contest-materials)

871 100 001 Woodworking, Junior
871 100 002 Woodworking, Intermediate
871 100 003 Woodworking, Senior

Note: Any 4-H member may enter an exhibit in the computer area. You do not have to be enrolled in the computer project to enter.

Identify a problem to solve or a project to work involving technology. Possible ideas might include: applying existing software programs to a 4-H project area, composing music, developing a game, drawing landscape scenes, designing buildings, publishing club newsletters, creating a website, editing a video, working with photographs, etc. Robotic projects are appropriate only if the software or the hardware is developed by the 4-H member. These classes are open to all 4-H members without being enrolled in computer project.

To qualify for judging each exhibit must have a 4-H Project Description securely attached. [http://oregon.4h.oregonstate.edu/resources/materials.html](http://oregon.4h.oregonstate.edu/resources/materials.html)

**Project Description Sheets and Judging Evaluations** can be found at: [http://oregon.4h.oregonstate.edu/resources/materials.html](http://oregon.4h.oregonstate.edu/resources/materials.html)

A written explanation including the following information must accompany your exhibit
A. Your name, age, grade in school, and number of years you have been using a computer. Indicate if you are enrolled in the computer project or if you are using the computer in another 4-H project.
B. Problem:
   1. What problem did you choose to solve? (or)
   2. What did you want to do? (accomplish)
   3. How did you come up with this problem or task?
   4. Why did you think a computer is an especially good tool to use to solve this problem?
C. Materials:
1. What materials (software, hardware, books, etc.) did you use?
2. Why did you choose these materials?

D. Steps:
1. List the steps you used to solve the problem or accomplish the task. For software projects, provide details on how you used the software to solve the problem or accomplish the task.

E. Results:
1. Show an example of your results with an explanation.
2. Did you like the results?
3. Did the results solve the problem or produce the outcome you wanted?
4. If you were to do it again, how would you do it differently, or how would you improve it?
5. Will you use these results in the future? If so, how? If not, why not?

Computer Software Application Project Description
Computer Software Application Evaluation
Computer Programming Project Description
Computer Programming Evaluation
Computer Hardware Project Description
Computer Hardware Evaluation
4-H Lego Project Description
4-H Lego Evaluation
Robotics Project Description
Robotics Evaluation
GIS Map Project Description
GIS Map Evaluation Criteria (861-06),
GIS Map Evaluation Score Card (861-05)
Geography Project Description
Geography Evaluation
Aerospace/Aeronautics Project Description
Aerospace/Aeronautics Evaluation
Rocketry Project Description
Rocketry Evaluation

Available at the county Extension office or on above website.

You may include disks or CDs as part of your exhibit. If you do, all files must be compatible with a PC.

Online projects using Google applications or other Web 2.0 software are acceptable. Youth must make sure clear directions are given in the project explanation so the judges can find and access the project online. Website exhibits must be viewable online or on a CD format.

Web site exhibits must be developed in html and submitted on a CD.

Although disks and CDs may be submitted, they may not be available for viewing except for judging. The exhibitor should prepare an exhibit item that will help the fair visitor understand what was done.

Exhibits entered in the “Programming” class must be a program written, translated, or substantially (at least 30%) altered by the 4-H member. Programming projects please submit a hard copy with all exhibits. Software application exhibits will utilize commercial software, (i.e., word processing, data management, spreadsheet, etc.,) to which the member may have made slight alterations.

Note: Fill in blank in class number (___) with one of the following numbers.
11 Junior, First year in this project area
12 Intermediate, First year in this project area
13 Senior, First year in this project area
21 Other Junior
22 Other Intermediate
23 Other Senior
34 Club Exhibit
8611001__ - Software Application, Word Processing
8611011__ - Software Application, Excel/Spreadsheet
8611021__ - Software Application, Presentation Software
8611031__ - Software Application, Graphic Design/Digital Imaging
8611041__ - Software Application, Database Management
8611051__ - Software Application, Multimedia Projects
8611002__ - Programming
8611003__ - Hardware Design
8631001__ - Lego robotics, Robot Construction
8631011__ - Lego robotics, Programming task
8631021__ - Lego robotics Displays
8631031__ - Robotics -
8601001__ - GPS/GIS, Projects
8601015__ - GPS/GIS, Maps
8602001__ - Geography -
8511001__ - Aerospace/Aeronautics-
8521001__ - Rocketry -
8006001__ - Science Fair -
8616001__ - Challenges -
8611001__ - Software Application, Word Processing
   Description: Projects created by youth that show learning in the area of word processing. Project should be an original creation by the participant that shows their word processing skills. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
   Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
   Evaluation: Use Computer Software Application Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html
8611011__ - Software Application, Excel/Spreadsheet
   Description: Projects created by youth that show learning in the area of spreadsheet design and usage. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have some formula usage in their project. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
   Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
   Evaluation: Use Computer Software Application Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html
8611021__ - Software Application, Presentation Software
   Description: Projects created by youth that show learning in the area of presentation software. Software can be any current presentation software including online versions like Google applications or voicethread.com. Project should be an original creation by the participant that shows their presentation design skills. Youth can also submit video clips of how the presentation was used. (For example: A video clip of the youth using the presentation in a group activity.) Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.
Project Ideas: May be available under SET Project Ideas at: http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Computer Software Application Evaluation available at http://oregon.4h.oregonstate.edu/resources/materials.html

8611031__ - Software Application, Graphic Design/Digital Imaging
Description: Projects created by youth that show learning in the area of graphic design or digital imaging. Software can be any current presentation software including online versions. Project should be an original creation by the participant that shows their graphic design or digital imaging skills. Youth are responsible for submitting clear directions on how judges can access them or program. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at: http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Computer Software Application Evaluation available at http://oregon.4h.oregonstate.edu/resources/materials.html

8611041__ - Software Application, Database Management
Description: Projects created by youth that show learning in the area of database management. Project should be an original creation by the participant that shows their spreadsheet skills. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at: http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Computer Software Application Evaluation available at http://oregon.4h.oregonstate.edu/resources/materials.html

ENGINEERING AND ROBOTICS
SCIENCE/TECHNOLOGY

8611051__ - Software Application, Multimedia Projects
Description: Projects created by youth that show learning in the area of Multimedia Projects. Software can be any current software including online versions. Project should be an original creation by the participant that shows their multimedia skills. In general, multimedia includes a combination of text, audio, still images, animation, video, or animation. Multimedia combines multiple content forms. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at: http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Computer Software Application Evaluation available at http://oregon.4h.oregonstate.edu/resources/materials.html

8611002__ - Programming
Description: Projects created by youth that show learning in the area of programming. Project should be an original creation by the participant that shows their programming skills. Hard copy of program must be submitted, and it is up to the youth to ensure the program will function or display at Fair. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed
on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:  
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Computer Programming Evaluation available at  
http://oregon.4h.oregonstate.edu/resources/materials.html

8611003__ - Hardware Design  
Description: Projects created by youth that show learning in the area of hardware. Project should be an original creation by the participant that shows their computer hardware skills. It is up to the youth to ensure the hardware and project will function or display at Fair. Intermediate and Senior members are expected to have apply their projects to real world scenarios. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:  
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Computer Hardware Evaluation available at  
http://oregon.4h.oregonstate.edu/resources/materials.html

8631001__ - Lego Robotic Construction:  
Description: Judging of Lego Robot. Robot and full description of what it is meant to accomplish must be submitted. Robots will be judged on structural stability, creativity, functionality. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:  
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Lego Evaluation available at  
http://oregon.4h.oregonstate.edu/resources/materials.html

8631011__ - Lego Robotic Programming Tasks:  
Description: Judging of stated programming task for a robot. Print version of the program must be submitted. Youth are responsible for submitting clear directions on how judges can access the files. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:  
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Lego Evaluation available at  
http://oregon.4h.oregonstate.edu/resources/materials.html

8631021__ - Lego Display –  
Description: An original creation built out of Legos. Does not need to be robotic. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:  
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Lego Evaluation available at  
http://oregon.4h.oregonstate.edu/resources/materials.html

8631031__ - Robotics –
Description: Project should involve youth created robots. They can be created from kits or from miscellaneous parts. All robots will be returned after fair. More weight is given for youth designed projects. Robot and full description of what it is meant to accomplish must be submitted. Robots will be judged on structural stability, creativity, functionality. Youth are responsible for submitting clear directions on how judges can access the files and make robot function. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Robotic Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html

8601001_ - GPS/GIS, Projects
Description: GPS or GIS Projects. Projects consist of a detailed goal, and multiple applications of either GPS or GIS skills. A conclusion is reached, a problem was evaluated or studied, a solution was found (or the problem was better defined) Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Map Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html

8601011_ – GPS/GIS, Maps
Description: A map is a single product of the data gathering, manipulation and presentation skills. Maps can be computer generated or hand drawn. Multiple maps should be entered under GPS/GIS Projects. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Map Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html

8602001_ – Geography –
Description: Projects involving youth learning and displaying knowledge about geography. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Geography Evaluation available at
http://oregon.4h.oregonstate.edu/resources/materials.html
Online Ideas: http://www.myWonderfulWorld.org

8511001_ – Aerospace/Aeronautics–
Description: Projects involving youth learning and displaying knowledge about Aerospace or Aeronautics. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html
Evaluation: Use Aerospace/Aeronautics Evaluation available at 
http://oregon.4h.oregonstate.edu/resources/materials.html

8521001__ – Rocketry –

Description: Projects involving youth learning and displaying knowledge about Rocketry. Value is placed on youth that can model the learning process, or show how their skills have increased while completing the project. Participant should answer the description page carefully and in full sentences. Rocket launch may be available at Oregon State Fair. If launch is not available, projects will be based on rockets and write ups regarding a group launch.

Project Ideas: May be available under SET Project Ideas at:
http://oregon.4h.oregonstate.edu/resources/materials.html

Evaluation: Use Rocketry Evaluation available at 
http://oregon.4h.oregonstate.edu/resources/materials.html